CLAIMS

1. Glass-, ceramic- or vitroceramic-based substrate (1), provided on at least part of at least one of its faces with a coating (3) with a photocatalytic property with a thickness between 5 and 50 nanometers and containing at least partially crystalline titanium oxide obtained by a pyrolysis technics from at least one precursor, notably an organo-metallic or a metallic halide component.

2. Substrate (1) according to Claim 1, **characterized in that** the crystalline titanium oxide is in the anatase form, in the rutile form or in the form of a mixture of anatase and rutile.

3. Substrate (1) according to Claim 1 or Claim 2, **characterized in that** the titanium oxide is crystalline with a degree of crystallization of at least 25%, in particular of between 30 and 80%.

4. Substrate (1) according to one of the preceding claims, **characterized in that** the crystalline titanium oxide is in the form of crystallites with an average size of between 0.5 and 60 nm, preferably 1 to 50 nm, in particular 10 to 40 nm.

5. Substrate (1) according to one of the preceding claims, **characterized in that** the coating (3) also contains an inorganic material, in particular in the form of an amorphous or partially crystalline oxide or mixture of oxides of the silicon oxide, titanium oxide, tin oxide, zirconium oxide or aluminium oxide type.

6. Substrate (1) according to one of the preceding claims, **characterized in that** the coating comprises additives capable of accentuating the photocatalytic phenomenon due to the titanium oxide, in particular by increasing the absorption band of the coating and/or by increasing the number of charge carriers by doping the crystal lattice of the oxide or by surface doping the coating and/or by increasing the yield and kinetics of the photocatalytic reactions by covering at least part of the coating with a catalyst.

7. Substrate (1) according to Claim 6, **characterized in that** the crystal lattice of the titanium oxide is doped, in particular by at least one of the metal elements from the group comprising niobium, tantalum, iron, bismuth, cobalt, nickel, copper, ruthenium, cerium and molybdenum.

8. Substrate (1) according to Claim 6, **characterized in that** the titanium oxide or the coating (3) in its entirety is coated with a catalyst, in particular in the form of a thin layer of noble metal of the platinum, rhodium, silver or palladium type.

9. Substrate (1) according to Claim 6, **characterized in that** the coating incorporates metal elements, in particular in the form of particles, targeted at increasing its absorption band, elements chosen from tin, cadmium, tungsten, cerium or zirconium.

10. Substrate (1) according to Claim 6, **characterized in that** the surface doping of the titanium oxide or of the coating which contains it is carried out by covering at least part of the said coating with a layer of metal oxide or salts, the metal being chosen from iron, copper, ruthenium, cerium, molybdenum, bismuth or vanadium.

11. Substrate (1) according to one of the preceding claims, **characterized in that** the surface of the coating (3) is hydrophilic, with in particular a contact angle with water of less than 5° after exposure to light radiation, and/or oleophilic.

12. Substrate (1) according to one of the preceding claims, **characterized in that** the RMS roughness of the coating (3) is between 2 and 20 nm, in particular between 5 and 20 nm.

13. Substrate (1) according to one of the preceding claims, **characterized in that** at least one thin layer (2) with an anti-static, thermal or optical function or forming a barrier to the migration of the alkali metals originating from the substrate (1) is arranged under the coating (3) with a photocatalytic property.

14. Substrate (1) according to Claim 14, **characterized in that** the thin layer (2) with an anti-static, optionally with controlled polarization, and/or thermal and/or optical function is based on conductive material of the metal type or of the doped metal oxide type, such as ITO, SnO_2:F, ZnO:In, ZnO:F, ZnO:Al, ZnO:Sn or metal oxide which is stoichiometrically deficient in oxygen, such as SnO_{2-x} or ZnO_{2-x} with $x < 2$.

15. Substrate (1) according to Claim 13, **characterized in that** the thin layer (2) with an optical function is based on an oxide or on a mixture of oxides with a refractive index intermediate between that of the coating and that of the substrate, chosen in particular from the following oxides: Al_2O_3, SnO_2, In_2O_3, silicon oxycarbide or silicon oxynitride.

16. Substrate (1) according to Claim 13, **characterized in that** the thin layer (2) with a barrier function with respect to alkali metals is based on silicon oxide, nitride, oxynitride or oxycarbide, on Al_2O_3:F or on aluminium nitride.

17. Substrate (1) according to Claim 13, **characterized in that** the coating (3) constitutes the final layer of a stack of anti-glare layers.

18. Monolithic, multiple unit of the double glazing type or laminated "dirt-repellent and/or anti-condensation" glazing incorporating the substrate (1) according to one of the preceding claims.

19. Application of the substrate (1) according to one of Claims 1 to 17 in the manufacture of anti-condensation and/or dirt-repellent "self-cleaning" glazing, where the dirty marks are of organic and/or inorganic type, in particular glazing for buildings of the double glazing type, windows for vehicles of the automobile windscreen, rear window or side window type, trains or planes or utilitarian glazing such as aquarium glass or glass for shop windows, for greenhouses, for interior furniture or for street furniture, or mirrors, television screens, or glazing with electrically controlled variable absorption.

20. Process for obtaining the substrate (1) according to one of Claims 1 to 17, **characterized in that** the coating (3) with a photocatalytic property is deposited by liquid phase pyrolysis, in particular from a solution comprising at least one organometallic titanium precursor of the titanium chelate and/or titanium alcoholate type.

21. Process for obtaining the substrate (1) according to one of Claims 1 to 17, **characterized in that** the coating (3) with a photocatalytic property is deposited by a sol-gel technique, with a method of deposition of the dipping or dip coating, cell coating, spray coating or laminar coating type, from a solution comprising at least one organometallic titanium precursor of the titanium alcoholate type.

22. Process for obtaining the substrate (1) according to one of Claims 1 to 17, **characterized in that** the coating (3) with a photocatalytic property is deposited by vapour phase pyrolysis, CVD, from at least one titanium precursor of the halide or organometallic type.

23. Process according to one of Claims 20 to 22, **characterized in that** the coating (3) with a photocatalytic property is deposited in at least two successive stages.

24. Process according to one of Claims 20 to 23, **characterized in that** the coating (3) with a photocatalytic property is subjected, after deposition, to at least one heat treatment of the annealing type.